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1. 5,802,526, Sep. 1, 1998, System and method for graphically displaying and navigating through an interactive voice response menu; Philip E. Fawcett, et al., 707/104; 348/14 [IMAGE AVAILABLE]

2. 5,717,747, Feb. 10, 1998, Arrangement for facilitating plug-and-play call features; Frank J. Boyle, III, et al., 379/201, 242, 269 [IMAGE AVAILABLE]

3. 5,712,901, Jan. 27, 1998, Automatic voice/text translation of phone mail messages; David R. Meermans, 379/88.14; 370/428; 379/88.15, 93.01, 93.24, 229 [IMAGE AVAILABLE]

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(FILE 'USPAT' ENTERED AT 15:29:26 ON 09 NOV 1998)

L1 110 S CALL CENTER
L2 2276 S INTERNET
L3 7 S L1 AND L2
L4 39737 S PROTOCOL
L5 3 S L4 AND L3

=> d 1-7 13

1. 5,802,526, Sep. 1, 1998, System and method for graphically displaying and navigating through an interactive voice response menu; Philip E. Fawcett, et al., 707/104; 348/14 [IMAGE AVAILABLE]
2. 5,778,060, Jul. 7, 1998, Work at home ACD agent network with cooperative control; Mary Rita Otto, 379/265, 207 [IMAGE AVAILABLE]
3. 5,765,033, Jun. 9, 1998, System for routing electronic mails; Alec Miloslavsky; 395/200.36, 200.3, 200.37 [IMAGE AVAILABLE]
4. 5,721,770, Feb. 24, 1998, Agent vectoring programmably conditionally assigning agents to various tasks including tasks other than handling of waiting calls; Joylee E. Kohler, 379/266, 210, 309 [IMAGE AVAILABLE]
5. 5,717,747, Feb. 10, 1998, Arrangement for facilitating plug-and-play call features; Frank J. Boyle, III, et al., 379/201, 242, 269 [IMAGE AVAILABLE]
6. 5,712,901, Jan. 27, 1998, Automatic voice/text translation of phone mail messages; David R. Meermans, 379/88.14; 370/428; 379/88.15, 93.01, 93.24, 229 [IMAGE AVAILABLE]
7. 5,708,828, Jan. 13, 1998, System for converting data from input data environment using first format to output data environment using second format by executing the associations between their fields; J. Todd Coleman, 707/523; 395/500, 885 [IMAGE AVAILABLE]

ABSTRACT:

A system for providing phone mail service for customers using either conventional voice telephones or text telephone units. The system of the present invention includes a phone mail unit for receiving a message from a caller, a switch connected to the phone mail unit for receiving the message and routing it to a translation unit for translation. The system also includes a gateway for receiving a data packet, containing call information related to the message. The data packet is routed to a console in the translation unit. A control interface is disposed between the gateway and the console. The control interface transfers the data packet from the gateway to the console. A communications assistant of the translation unit receives the message and data packet and translates the message from voice-to-text or text-to-voice. The translated message is then sent back to the customer's mailbox for storage and subsequent retrieval. The translated message may also be sent to the customer's electronic mailbox, pager and/or **Internet** address for retrieval.

SUMMARY:

BSUM(15)

The present invention provides voice-to-text and text-to-voice services in conjunction with a phone mail service. The voice-to-text portion of this invention provides two key functions: (1) automatic conversion of voice phone mail messages into text phone mail and storage of these messages for subsequent retrieval by deaf users; and (2) automatic translation of voice phone mail messages to text with dispatch to text pagers, electronic mailboxes and **Internet** addresses. Similarly, the text-to-voice portion of this invention also provides the key function of automatic translation of text phone mail messages to voice and storage of these voice messages in the phone mail unit for subsequent retrieval.

DETDESC:

DETD(8)

The Rockwell Galaxy ACD of the preferred embodiment has an X.25 transaction port through which certain information related to calls may be output for use by external systems. In the preferred embodiment, ANI Gateway 120 and ANI Server 116 are personal computers that run essentially **protocol** conversion software. ANI Gateway 120 distributes message data to ANI Server 116 based on the ACD line or station number to which the data applies. In the process, it also converts the X.25 messaging of the ACD to an internal form used by ANI Gateway 120 and ANI Server 116. ANI Server 116 receives the messages from ANI Gateway 120 and passes them to the correct communications assistant console (described in further detail below) based upon the line or station number stated within the message data. ANI Server 116 also converts the message format to an Ethernet message format for transmission to the communications assistant console.

DETDESC:

DETD(10)

ANI Gateway 120 and ANI Server 116 allow a single ACD (telephone switch 108) to serve multiple geographically dispersed call centers. As

described above, ANI Gateway 120 receives a call data packet that comes with an incoming call and routes it to an ANI Server 116 situated in the **call center** where a communications assistant 124 is located. ANI Gateway 120 has a table that associates each communications assistant line number with their location, and hence the corresponding ANI Server 116. It is also possible for the ACD (telephone switch 108) to communicate with communications assistant 124 either directly via Ethernet, Token Ring, or other means, or by way of a Computer Telephony Integration (CTI) Interface connection.

DETDESC:

DETD(25)

The system of the present invention is designed, in particular, to provide phone mail service to customers who are hearing-impaired. However, the system of the present invention could also be used by a customer having a conventional voice phone. In this case, the customer may want to convert their voice mail messages to text so that they can be routed to an electronic mailbox, a pager, or via the **Internet** to a particular site or address. This embodiment is shown in FIGS. 3 and 4 and described in further detail below.

DETDESC:

DETD(26)

FIG. 3 shows an alternate embodiment of a system 300 of the present invention. System 300 operates in much the same way as system 100 described above. System 300 further includes a text server 304 connected to control interface 112. In this alternate embodiment, a customer can set up his account to receive text messages at several different types of locations. In system 300, text server 304 is connected to one or more of the following: an electronic mailbox 308, a pager 312 and an **Internet** address 316. Thus, the customer's account information will indicate to communications assistant 124 that the text message should be sent to an alternative mailbox, in place of or in addition to sending the message to the text or voice mailbox that the customer has on phone mail unit 104. After the message is translated, the text message is advanced to one or more of the customer's predetermined destinations.

DETDESC:

DETD(30)

In step 432, control interface 112 determines if the message should be sent to the customer's **Internet** address 316. If yes, control interface 112 sends the translated message to **Internet** address 316, as shown in a step 436, and the call flow ends. If no, the call flow ends immediately.

CLAIMS:

CLMS(11)

11. The system of claim 10, wherein said message is routed to said electronic mailbox via the **Internet**.

CLAIMS:

CLMS(15)

15. The system of claim 14, wherein said message is routed to said electronic mailbox via the **Internet**.